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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/183,335

10/30/1998

ROBERT A. FOSTER

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05/18/2006

MACPHERSON KWOK CHEN & HEID LLP  
1762 TECHNOLOGY DRIVE, SUITE 226  
SAN JOSE, CA 95110

EXAMINER

BORLINGHAUS, JASON M

ART UNIT

PAPER NUMBER

3628

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/183,335

Applicant(s)

FOSTER, ROBERT A.

Examiner

Jason M. Borlinghaus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1 – 2, 4 – 16 and 19 - 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Disclosed Prior Art (applicant's specification, pp. 1, line 15 – 2, line 21) and Parsaye (Parsaye, Kamran & Chignell, Mark. *Expert Systems For Experts*. John Wiley & Sons. 1988. pp. 35 – 60, 177 – 178, 191 – 210 and 295 - 309).

**Regarding Claims 1 - 2**, Disclosed Prior Art discloses, a method for pricing financial transactions (products), said method comprising:

- creating a plurality of price tables (fee arrangements – see p. 2, lines 1 – 7);
- a plurality of product rules (product designation. “Fee arrangements can take many shapes, e.g., by product...” – see p. 2, lines 1 – 7) each applicable to one or more of said financial transactions (products), wherein

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each of said product rules (product designation) is linked to one of said price tables (fee arrangements). (see p. 2, lines 1 – 21); and

- for each one of said financial transactions (products). (see p. 2, lines 1 – 21):
- identifying an applicable one of said product rules (product designations) for said transaction (product). (see p. 2, lines 1 – 21); and
- pricing said transaction (calculating fee for said product) according to the price table (fee arrangement) linked to said identified applicable product rule (product designation). (see p. 2, lines 1 – 21); and
- wherein said price table (fee arrangement) comprises a billing (calculation of fees) method. (see p. 2, lines 1 – 21).

Disclosed Prior Art does not teach in a data processing system, a method for pricing financial transactions, said method comprising:

- creating, in a database system of the data processing system, a plurality of price tables; and
- creating, in the database system, a plurality of product rules each applicable to one or more of said financial transactions, wherein each of said product rules is linked to one of said price tables.

Disclosed Prior Art does not teach that the utilization of price tables (fee arrangements) is automated. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have automated the method, since it has been held that broadly providing a mechanical or automatic means to replace

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manual activity that accomplishes the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

Storage of information in a database and the use of a rule-based system/method for retrieval and filtering of said information is old and well-known in the art of computer system designs and expert system design, as evidenced by Parsaye (see pp. 35 – 60 and 195 – 211). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art by incorporating a database storage capacity and a rule-based system/method for retrieval, as disclosed by Parsaye, to allow for the use of an expert system to automate the retrieval and application of data, such as pricing, efficiently and quickly.

**Regarding Claim 4**, Disclosed Prior Art does not teach a method wherein:

- each of said product rules is linked to one of said price tables by a price table name.

Parsaye discloses a method wherein:

- each of said product rules (rules) is linked (related) to one of said price tables (frames) by a price table name (frame-name). (see pp. 191 – 200, especially 5.8.1. Rules That Act on Frames, p. 196).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art and Parsaye by incorporating a linkage between the product rule (product designation) and price tables (frames) by the name of the price table (frame), as disclosed by Parsaye, to incorporate and utilize

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standard conventions and procedures commonly utilized for rule-based expert systems, such as allowing the rule access to the stored information.

**Regarding Claim 5 - 16,** Disclosed Prior Art discloses a method:

- wherein an entry in each of said price tables (fee arrangements) comprises a pricing method (fee). (see p. 2, lines 1 – 21).

Neither Disclosed Prior Art nor Parsaye disclose a method:

- wherein said pricing method is flat fee;
- wherein said pricing method is unit price;
- wherein said pricing method is unit cost;
- wherein said pricing method is volume discount;
- wherein said pricing method is tiering;
- wherein said pricing method is cost plus;
- wherein said pricing method is minimum revenue;
- wherein said pricing method is markup of total price; and
- wherein said pricing method is bundled pricing; and

The above cited pricing methods are old and well-known in the art of marketing and product pricing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art and Parsaye by incorporating various old and well-known pricing methods into the price tables (fee arrangements) allowing for pricing of financial transactions (products) based upon any old and well-known pricing strategies that the inventor desired.

**Regarding Claim 19,** Disclosed Prior Art does not teach a method wherein:

- said product rules comprise a default rule.

Default rules in a rule-based expert system is old and well-known in the art of computer system design and expert system design, as evidenced by Parsaye (see pp. 177 – 178). It would have been obvious to have modified Disclosed Prior Art and Parsaye by incorporating a default rule, as disclosed by Parsaye, allowing for the assumption that some “events have regular or default behavior.” (see p. 177).

**Regarding Claim 20 – 22,** Disclosed Prior Art discloses a method wherein:

- said price table (fee arrangement) contains prices (fees). (fee arrangements – see p. 2, lines 1 – 7).

Neither Disclosed Prior Art nor Parsaye teach a method wherein:

- said price table (fee arrangement) contains costs; and
- said price table (fee arrangement) contains negative values (costs/losses).

Consideration of costs and negative values (costs/losses) in pricing is old and well-known in the art of marketing and pricing. It would have been obvious to have modified Disclosed Prior Art and Parsaye by incorporating costs and negative values into the pricing tables (fee arrangements) allowing for inclusion of old and well-known considerations utilized in pricing.

**Claims 3, 17 – 18 and 23 - 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Disclosed Prior Art and Parsaye, as in Claim 1 above, and in further view of Hendler (Hendler, James A. *Expert Systems: The User Interface*. Albex Publishing Corporation. Norwood, NJ. 1988. pp. 31, 46 – 47, 113 and 133).

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**Regarding Claim 3**, Disclosed Prior Art discloses a method, wherein each of said product rules (product designation) comprises:

- a name of said product rule (product designation. “Fee arrangements can take many shapes, e.g., by product...” – see p. 2, lines 1 – 7 – Inherently there must some name for the product if the fee arrangement is organized by product); and
- pricing and billing information (fee arrangements – see p. 2, lines 1 – 7).

Disclosed Prior Art does not teach a method wherein each of said product rules comprises:

- a name of said product rule;
- a status of said product rule;
- pricing and billing information, including a link to one of said price tables;  
and
- display only information.

Parsaye discloses a method wherein each said produce rule (rule) comprises:

- including a link (relation) to one of said data in information storage (frames). (“Rules, which relate facts and frames.” – see p. 57).

Hendler discloses a method wherein each of said product rules (rules) comprises:

- a name of said product rule (rule). (“...shows the importance of naming rules carefully in the first place...” – see p. 113);



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- a status of said product rule (rule). (“The “:::” marks the beginning of rule attributes. There are predefined system attributes, such as status and author.” – see p. 133); and
- display only information. (Rule accesses knowledge base and retrieved information is “selectively displayed as desired by the knowledge base author or eventual users by using the DISPLAY command (e.g. DISPLAY DEFINITION (OBESITY) or DISPLAY CERTIFICATION).” – see pp. 46 – 47).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art and Parsaye by incorporating a linkage between the product rule and stored data, as disclosed by Parsaye, and naming the product rule, providing a status of the product rule and assigning display only information, as disclosed by Hendler, to incorporate and utilize standard conventions and procedures commonly utilized for rule-based expert systems.

**Regarding Claim 17**, neither Disclosed Prior Art nor Parsaye teach a method wherein said product rule further comprises:

- a plurality of mandatory attributes, said mandatory attributes include an identifier for said product rule.

Hendler discloses a method wherein said product rule further comprises:

- a plurality of optional/mandatory attributes (rule attributes), said mandatory attributes (rule attributes) include an identifier (name) for said product rule. (supra – see pp. 113 and 133).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art, Parsaye and Hendler by incorporating attributes, both optional and mandatory, with one attribute including an identifier (name) to the product rule, as disclosed by Hendler, to incorporate and utilize standard conventions and procedures commonly utilized for rule-based expert systems, such as providing the rule an identifier by which access to the rule can be obtained.

**Regarding Claim 18**, Disclosed Prior Art does not teach a method further comprising:

- in creating one of said product rules, applying a validating rule to validate said product rules prior to committing said product rules to said database system.

Validation and verification of rules within a rule-based expert system prior to implementation is old and well-known in the art of computer system design and expert system design, as evidenced by Parsaye (see pp. 295 - 309) and Hendler (see p. 31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art, Parsaye and Hendler by incorporating a validating rule, as disclosed by Parsaye and Hendler, to access the validity and accuracy of the rules prior to implementation of the system.

**Regarding Claim 23**, further system claim would have been obvious from method claims rejected above, Claims 1, 4 and 17, in combination, and is therefore rejected using the same art and rationale.

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**Regarding Claim 24**, further system claim would have been obvious from method claim rejected above, Claim 2, and is therefore rejected using the same art and rationale.

**Regarding Claim 25**, further system claim would have been obvious from method claim rejected above, Claim 3, and is therefore rejected using the same art and rationale.

**Regarding Claim 26**, further system claim would have been obvious from method claim rejected above, Claim 17, and is therefore rejected using the same art and rationale.

**Regarding Claim 27**, further system claim would have been obvious from method claims rejected above, Claims 3 and 17, in combination, and is therefore rejected using the same art and rationale.

**Regarding Claim 28**, further system claim would have been obvious from method claims rejected above, Claim 18, and is therefore rejected using the same art and rationale.

**Regarding Claim 29**, further system claim would have been obvious from method claims rejected above, Claim 19, and is therefore rejected using the same art and rationale.

### ***Response to Arguments***

Applicant's arguments filed 03/03/06 have been fully considered but they are not persuasive.

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In response to applicant's argument that cited reference(s), neither alone nor in combination, discloses nor suggests each claim limitation of Claims 1 and 3, the examiner respectfully disagrees.

In the instant case, applicant discloses in the specification, under the heading of Discussion of Related Art, herein referred to as Disclosed Prior Art, the use of fee arrangements and the use of fee arrangements organized through various methods, such as by designated product and other transaction attributes. Specifically, applicant discloses:

Furthermore, fee arrangements change in value and structure in response to competitive situations. Fee arrangements can take many shapes, e.g., by product; by time of submission; by specified execution time; by window of time between submission and execution; by transaction value; by pre-assigned payment slots; and/or by some combination of these. In addition, customers are mobile and shop for the best deals. The methods of payment, timings of payment, cash management practices and credit requirements change. Also, competitors pricing strategies change. In response to these changes, FSCS need the ability to calculate pricing accordingly. (see Applicant's specification, p. 2, lines 1 - 12).

Applicant contends that Disclosed Prior Art does not disclose nor suggest product rules nor price tables, nor that such elements are linked. Examiner respectfully disagrees and asserts that Disclosed Prior Art does disclose price tables ("fee arrangements") wherein each price table ("fee arrangement") is referenced and/or linked to a product rule (a product designation as communicated by phrase "fee arrangements can take many shapes, e.g., by product").

Applicant contends that the Disclosed Prior Art "relates only generally [to] the fee arrangements". (see applicant's arguments, p. 9). Examiner agrees with

applicant's contention. However, the claim limitations can be found within the Disclosed Prior Art's general discussion of fee arrangements, nonetheless.

Applicant contends that Claim 1 claims that "'product rules' and 'price tables' are interacting entities of a database system" and that Disclosed Prior Art "does not disclose the operations of a database system." (see applicant's arguments, p. 9). Examiner agrees. However, "one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references." *In re Keller, Terry, and Davies*, 208 USPQ 871, 882 (CCPA 1981). Additional cited referenced references, Parsaye and Hender, are utilized for that purpose.

The Parsaye reference, *Expert Systems for Experts*, is a general textbook concerning the development and structure of expert based systems. Parsaye discloses the storage of information in a database ("a relational database") in order to allow a computerized system to retrieve and/or analyze stored data. (see pp. 203 – 204). Furthermore, Parsaye discloses the organization of information within the database according to "tables" and accessing such information through use of "rules". (see pp. 204 – 210). While Parsaye does not, as the applicant contends, specifically disclose "product rules" nor "price tables," Parsaye does disclose generally applicable technological concepts such as data storage, data analysis and data retrieval, which would have been applicable to any endeavor seeking to utilize data storage, data analysis and data retrieval.

The modification of the Disclosed Prior Art, which discloses price tables (“fee arrangements”) linked to product rules (“product”), by incorporation of a computerized system to store and retrieve such information, as disclosed by Parsaye, would have been obvious to one of ordinary skill in the art at the time the invention was made as it “is natural to try and apply the technology of expert systems to these large databases” (see Parsaye, pp. 203 – 204), and in light of the general drive to automate information storage and retrieval which is obvious in view of *In re Venner*, 120 USPQ 192.

The Hendler reference, *Expert Systems: The User Interface*, is another general textbook concerning the development and structure of expert based systems. Hendler was utilized to account for claim limitations that are standard concepts in expert systems, such as product rule naming (see p. 113), product rule status (p. 133) and display information (see pp. 46 – 47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art and Parsaye by incorporating standard conventions and procedures commonly utilized in rule-based expert systems, as disclosed by Hendler, as such conventions and procedures are commonly utilized in rule-based expert systems.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

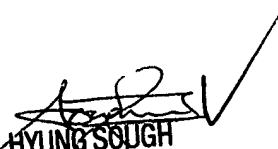
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Borlinghaus whose telephone number is (571) 272-6924. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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HYUNG SOUGH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600